Special Issue

Back to the Origin: Addressing Physical Phenomena with Information-Theoretic Tools

Message from the Guest Editors

In their works, Boltzmann, Shannon and others disclosed the awesome link of entropy, first formulated in the "physical" context of thermodynamics, with statistics and information, eventually bringing about information theory. The application of information theory to a wide spectrum of "less physical" fields then led to concepts like approximate and sample entropy, transfer entropy, permutation entropy and higher-order multivariate measures. This process is far from being definitely established, thus making information theory still a thriving research field. In an apparent contradiction, fewer works are being devoted to addressing purely physical problems with information-theoretical methods, as a complementary approach to more conventional analytical techniques. This Special Issue is devoted to contributions addressing applications of information theory in physical problems. Contributions about new methods and works addressing complexity and stemming from other research fields like biomedical engineering, neuroscience, geophysics and climatology, in which both the physical aspect and the information-theoretical one are apparent, are also welcome.

Guest Editors

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Deadline for manuscript submissions

closed (20 December 2022)

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/si/113484

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About the Journal

Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

Editor-in-Chief

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